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high frequencies and a band of low frequencies, whereby an enhanced audio signal is produced that is recognizable as being said input audio signal enhanced such that audible sound reproduced from the enhanced audio signal exhibits a perceptively improved harmonic quality and sound source separation compared to audible sound reproduced from the input audio signal.

35. (Four Times Amended) A method of enhancing the quality of electronic audio signals, comprising the steps of:

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providing an input audio signal having a band of frequencies with a high end and a low end; and

distorting the input audio signal so as to increase in amplitude as per increasing frequencies from a reference frequency up to an amplitude peak at a high frequency and, after the high frequency, decrease in amplitude as per increasing frequencies toward the high end, and the reference frequency separates the band of frequencies into a band of high frequencies and a band of low frequencies, whereby an enhanced audio signal is produced that is recognizable as being the input audio signal enhanced such that audible sound reproduced from the enhanced audio signal exhibits a perceptively improved harmonic quality and sound source separation compared to audible sound reproduced from the input audio signal.

40. (Four Times Amended) An apparatus comprising:

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a source of an input audio signal having a band of frequencies with a high end and a low end; and

a circuit connected to said source to receive said input audio signal and operatively adapted such that when said input audio signal having a frequency band with a high end and a low end is transmitted therethrough, the input audio signal is distorted so as to increase in amplitude as per increasing frequencies from a reference frequency toward the high end and up to an amplitude peak at a high frequency and, after the high frequency, decrease in amplitude as per increasing frequencies toward the high end, and so as to increase in amplitude as per decreasing frequencies from the reference frequency toward the low end and up to an amplitude

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Gand
peak at a low frequency and, after the low frequency, decrease in amplitude as per decreasing frequencies toward the low end, where the reference frequency separates the band of frequencies into a band of high frequencies and a band of low frequencies, and whereby an enhanced audio signal is produced that is recognizable as being said input audio signal enhanced such that audible sound reproduced from the enhanced audio signal exhibits a perceptively improved harmonic quality and sound source separation compared to audible sound reproduced from the input audio signal.

[Please add new claims 45-53 as follows.]

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45. (New) The apparatus as recited in claim 31, wherein said source comprises one of a microphone, a magnetic tape player, an optical disc player, a radio, a television, and a telephone.

46. (New) The apparatus as recited in claim 31, wherein there is up to a total of only two significant amplitude peaks between the low end and the high end.

47. (New) The apparatus as recited in claim 46, wherein there is only one significant amplitude peak between the reference frequency and the high end.

48. (New) The method as recited in claim 35, wherein there is up to a total of only two significant amplitude peaks between the low end and the high end.

49. (New) The apparatus as recited in claim 48, wherein there is only one significant amplitude peak between the reference frequency and the high end.

50. (New) The apparatus as recited in claim 40, wherein there is only two significant amplitude peaks between the low end and the high end.

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51. ~~(New) The apparatus as recited in claim 31, wherein said input audio signal~~